esi® Engineering Bulletin

BRIDGES
AND
ACCESSORIES

no. 17

Electro Scientific Industries
7524 S. W. MACADAM AVE. • PORTLAND 19, OREGON

DECEMBER 1960
REPLACES APRIL 1960

HIGH FREQUENCY ACCURACY OF 250 AND 290-A UNIVERSAL IMPEDANCE BRIDGES

The accuracy specifications of the 250 and 290-A general purpose impedance bridges are chosen to include the effects of long term drift, temperature coefficients, frequency range limits and measurement range limits.

For low loss capacitors and inductors and low reactance resistors much better results can be expected in all except the extreme ranges.

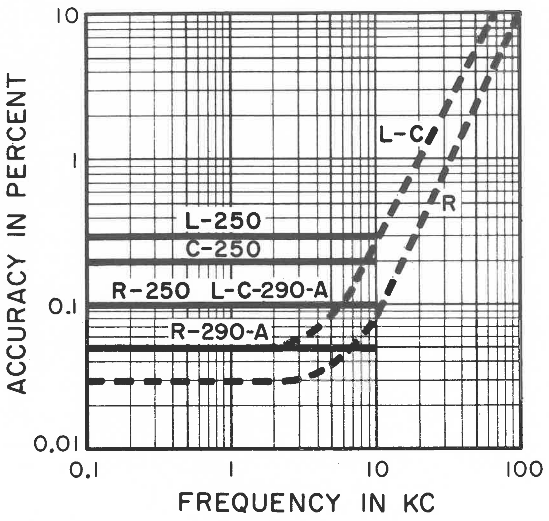

FIGURE 1

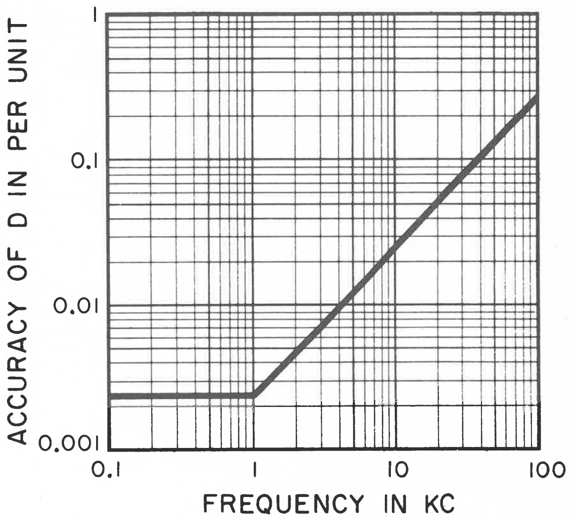

FIGURE 2

The accompanying graph, Figure 1, shows the rated accuracy (solid curve) and the typical accuracy (dashed curve) as a function of frequency when operated within a few degrees of 25°C after recent calibration.

D and Q accuracy require a slightly different approach. For low D (high Q) the value of D (D = 1/Q) may be in error by the amount shown in Figure 2. This is in addition to the rated D and Q accuracy of 2% of the reading.

LITHO IN U. S. A.